

**THE EFFECT OF SAVINGS IN COMMERCIAL BANKS ON KENYA'S  
ECONOMIC GROWTH**

**BY**

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## DECLARATION

This research project is my original work and it has not been submitted to any university or college for examination.



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This research proposal has been submitted for examination with my authority and approval as the university supervisor.



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## **DEDICATION**

This project is dedicated to my family for their support, guidance and advice during this study.

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## **ABBREVIATIONS**

<b>CBK</b>	-	Central Bank of Kenya
<b>FDI</b>	-	Foreign Direct Investment
<b>GCF</b>	-	Gross Capital Formation
<b>GDP</b>	-	Gross Domestic Product
<b>ROA</b>	-	Return on Assets
<b>ROE</b>	-	Return on Equity

## ABSTRACT

Countries with higher savings rates experience faster economic growth than those with lower savings rates. By supplying a second source of income, capital accumulation gives a country more opportunities for output and productivity. The most crucial factor in increasing in-country capital is domestic savings growth, hence rising nations should prioritize encouraging domestic savings in order for capital to be invested in the most productive businesses. Governments must therefore pursue a number of policies, such as promoting savings, enhancing investment, and increasing domestic output, in order to accomplish economic development. The purpose of the study was to ascertain how savings in commercial banks affected Kenya's economic expansion. The research was impacted by the dependence ratio, marginal propensity to save, and the Harrod-Domar growth theories. The study only used secondary data sources, and the data it gathered were time series data. Inferential statistics, including correlation and multiple linear regression analysis, were used in the study. A causal research design was employed in the study. The study only used secondary data sources, and the data it gathered was time series data. The study used multiple linear regression and correlation inferential statistics. Further findings were that the model entailing; savings, FDI, GCF, exchange rate fluctuations, and prevailing interest rates significantly predicts Kenya's economic growth. The final findings were that savings, FDI, GCF, exchange rate fluctuations, and prevailing interest rates each individually do not have a substantial impact on economic growth. Although savings and FDI are the sources of capital for investments and nations with low national savings rates are more dependent on FDI, policy recommendations are made to government officials, policy makers in the Treasury, as well as legislators, not to primarily focus on savings and FDI to spur economic growth. It is advised that policymakers take into account all factors influencing economic growth rather than concentrating only on savings and foreign direct investment. Managers and consultants of financial institutions are advised to source various non-deposit liabilities in addition to relying on deposits as their primary source of funding in order to get funds to lend to the private and public sectors. However, they might also look for alternative non-deposit liabilities to get capital to lend to the public and private sectors in order to improve their financial performance. Savings have no direct impact on economic growth, thus they will also not affect how well financial institutions function in the long run. Finally, suggestions are made to the general public on how to promote economic growth other than merely boosting savings rates.

# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the Study

Countries with higher savings rates experience faster economic growth than those with lower savings rates. By supplying an additional source of income, capital accumulation gives a country more opportunities for production and productivity (Ribaj, Meçe, Cinaj, & Kadrimi, 2020). In this regard, UNCTAD (2004) emphasizes that increasing domestic savings is the most crucial factor in boosting in-country capital, and rising nations should concentrate on encouraging domestic savings in order for capital to be invested in the most productive enterprises. Governments must therefore undertake a number of measures to accomplish economic development, such as promoting savings, enhancing investment, and increasing domestic output (Rasmidatta, 2011).

The main principle guiding this research is Keynes' (1936) marginal propensity to save theory. According to the hypothesis, increasing revenue causes the savings rate to increase. A rise in total savings would spur investment and promote growth when it comes to economic development, particularly in emerging nations where financial capital deposits placed in commercial banks are the main source of saves. Fiscal deficits and a negative balance of payments can arise from low savings rates. The Rodriguez-proposed dependence ratio theory is the other theory that informs this investigation (1988). According to the theory, nations with greater percentages of children or seniors will have a lower capacity to save, resulting in a smaller relative size of the economically active population and, as a consequence, a lower country's productivity. The Harrod-Domar development theory, created separately by Harrod (1939) and Domar (1946), is the ultimate hypothesis that guides this research, albeit a similar model had been suggested by Cassel (1924). The theory is that the nation's savings rate may be increased from low to high, Gross Domestic Growth (GDP) growth will rise as well. As a

result, growing national savings and investment is the only mechanism for development and economic growth. As a consequence, a positive connection is expected between growth of real GDP and rate of saving.

Customers' deposits continue to be the primary source of financing for Kenya's banking industry, accounting for 75% of total funding liabilities. The total bank deposits as of June 2020, were KES 3.616 trillion (CBK, 2020). A significant increase in cash deposits has been observed during the time period spanning from 2001 to 2011, according to statistics provided by the Central Bank of Kenya's regulatory reports. Deposits have increased by almost 1138 percent from June 2000, from KES 292 billion to over 3.616 trillion by the end of 2020 (CBK, 2000; CBK, 2020). However, economic development has shown substantial yearly fluctuation in recent history. Kenya's GDP increased by 5.6% in 2017 compared to a growth rate of 5.3% in 2016, with the banking industry being one of the other major industries that contributed to the increase (KNBS, 2018).

### **1.1.1 Savings**

Saving means making a percentage of current earnings available for the purpose of future usage or resource flow that accrue over a certain period. Saving can be raised in the terms of securities purchases, bank deposits or increased cash holdings (Basu, Inklaar & Wang, 2011). The current study is going to utilize commercial bank deposits as a proxy for savings. Bank deposits include cash placed in banks to secure depositing accounts such as savings accounts, control accounts and cash-market accounts. The holder of the account is entitled to withdraw any amount of the monies deposited under the provisions of the account agreement (Fixler, 2009).

The Diewert (2011) states that the term deposit is used to describe the money maintained or maintained on any bank account, in particular to collect interest. Basu, Inklaar, and Wang (2011) say two common types of bank deposits exist: deposits of demand and deposits of time. Demand deposits are the placing of monies in an account where the depositor can, without warning or with less than seven days' notice, retract his or her money from the account. A time deposit is a loan deposit kept for a specified length by a bank or financial institution whereby the depositor can withdraw the funding only after a notification has been sent.

Bank deposits are an integral method in which money circulates across an economy according to Fixler (2010). Some deposits in banks, primarily in demand deposits and other liquid assets owned by the central bank are part of an M1 money supply which is a physical currency plus the demand deposits of a country. Included in the M2 money supply, M1 plus savings accounts and time deposits over KES 100,000. Time deposits below KES100,000 are included in the M3 money supply. The central bank does not now impose the requirement to keep savings deposits and deposit certificates (CDs) in its reserves, but the amount of deposits on demand that a financial institution has often dictates whether or not it has any reserves in hand; in vault cash or on deposit with the central bank (Rescue Center, 2009).

Gross savings are evaluated by a reduction in GDP consumption (Basu, Inklaar & Wang, 2011). Fixler (2009), who bases his calculations on data from 1993 to 2006, assumes the risk-free asset rate of return of the household and this figure is equivalent to  $H$  over that time period while the banking sector pays an average interest rate of  $r_D$  on banks deposits. The costs associated with end-of-period deposits therefore remain the same regardless of the length of the period.

$$u_D \equiv 1 - (1 + r_D)/(1 + \rho_H) = (\rho_H - r_D)/(1 + \rho_H)$$

The three strategies listed by Rose and Hudgins (2013) for valuing bank deposits are cost-plus pricing, conditional pricing, and relationship pricing. Deposit fees are frequently necessary for a bank to cover all of the higher cost services provided, plus a little profit margin. A schedule of interest rates or fees will be published by a bank, which will be evaluated for deposits of different sizes and on account activity, subject to price conditions. Usually higher volume deposits generate higher returns on depositors' interest or lower service charges are assessed to encourage clients to have a high average account level, giving the bank more money to invest in earning assets. Relation fees are costs levied to a client on the quantity of services and the intensity of the use of services purchased from a bank by the client. The current study was going to utilize the value of deposit liabilities of all commercial banks to indicate aggregate level of deposits in the Kenyan commercial banks.

### **1.1.2 Economic Growth**

An increase in GDP, or any other aggregate measure of income, can be used to show growth in the economy. A rule of thumb is to use the GDP growth rate for measuring economic growth. The quantity of products and services produced alludes to economic growth. If economic growth is negative, particularly during periods of economic crisis and depression, when growth is negative, the economy can be thought of as declining (Barro, 1997). One of the main goals of monetary policy is to promote economic growth, which is an important macroeconomic goal for every country (Otieno, 2015). The expansion of the production and consumption of products and activities in the economy is discussed by Mosiori (2014) in relation to the improvement of money. Companies and greater individual savings can boost economic growth in a nation by enacting laws that stimulate the accumulation of investment capital (Mishkin, 2004).

The growth of the overall country's per capita output, frequently called GDP or any other aggregate measure of income, is recognized as the increase in economic development and mostly as a rate of GDP growth. Economic development only involves produced goods and services that are negative or positive (Omoke, 2010). There are numerous advantages for various economic stakeholders as economic growth improves. Some of the advantages include job development, improved living standards, improved product marketplaces and many others (Mishkin, 2004).

Growth of economy is measured GDP, government final expenditure on consumption (GFCE), household expenditure on Gross Capital Formation and consumption. The annual increase of the percentage growth of these metrics is the economic growth (Love & Lea, 2006). The present study used yearly GDP growth as an indicator of economic growth.

### **1.1.3 Savings and Economic Growth**

Investment, undoubtedly, helps to aggregate growth; nevertheless, without rising savings, investment cannot be increased. A country needs to expand its overall savings to promote sustainable economic development, which will in turn increase investment and growth in GDP. More savings, particularly in emerging countries, contribute to decreased consumption that could also lead to more capital investments and ultimately to higher growth rates (Rasmidatta, 2011).

Solow (1956), who argued that greater savings lead to more investment and increased output, emphasised the necessity of saving economic growth. The idea of saving is crucial for economic developments, as they are contributing to increasing investment, speeding up economic growth, was strengthened by McKinnon (1973) and by Shaw (1973). To study the

causal link between saving and growth of economy, the correctional technology and corrective vector was applied by Sajid and Sarfraz (2008). Other researchers think that consumer customs development has an advantageous association for sustainable economic development between saving and GDP growth in emerging nations (Carroll, Overland, & Weil, 2000).

Additionally, Anoruo and Ahmad (2001), using the vector correction model (VECM) and co-integration to examine the causal relationship between domestic economic growth and household savings growth rates, have established a long-term relationship between economic growth and economic savings growth. Thirlwall (2002) examined Egypt's economic development in order to determine the role that financial liberalization had in promoting investment and saving. According to the report, Egypt's ability to increase and maintain its level of growth depends heavily on its ability to raise savings. Romm (2003), on the other hand, discovered that domestic saving and deposit growth had an effect on a country's economic growth both directly and indirectly. She conducted her research with Johansen VECM.

Alguacil, Cuadros, and Orts (2004) found that domestic savings are affected by economic growth. This conclusion supported Solow's model, which considers that higher economic growth leads to bigger savings. Additional studies show the contrary. Surprisingly, in a study of the link between growth of economy and domestic savings in China, Lean and Song (2008) noted that China's economic growth has been co-integrated into two additional variables: home saving and increasing enterprise/business savings. There is a link between the Chinese home economy and Chinese growth in the short run. In the longer term, economic expansion is justified and leads to increasing business/company savings. Misztal (2011) suggested that growth of GDP and deposit/domestic savings are causally related. Misztal (2011) has also

carried out a second analysis of the causal and effects link for emerging economies between the economy and savings.

In contrast to the industrialized countries, in low- and middle-income nations, increased domestic savings is linked with increased economic growth. With many types of money available at low prices, businesses in industrialized countries do not have to search for investors from outside their country and have a major investment in development infrastructure and technology. In industrialized countries this correlation is not possible (Budha, 2014; Olapido, 2010).

#### **1.1.4 Commercial Banks in Kenya**

The banking industry in Kenya is governed by a variety of laws and norms. The legislation passed by the CBK, which also regulate the industry, come first. The Banking Act is another law that governs the sector. The CBK is tasked with formulating and implementing financial policies, monitoring bank liquidity and creditworthiness, and upholding an appropriate monetary policy regime. Commercial banks are financial institutions that accept deposits and loan money to consumers, and they are regulated by the CBK (Githaiga, 2015). There were 43 licensed commercial banks and one mortgage financing bank in Kenya as of June 30, 2018. Thirty banks were locally held, while thirteen were owned by foreigners.

Banks monopolize the financial business in Kenya and hence rely heavily on commercial banks for their financial intermediaries process (Kamau, 2009). As a bond which keeps the economy together, Oloo (2009) believes that the banking industry in Kenya. For their very survival and expansion, industries such as agriculture and manufacturing rely almost on the banking sector. Banks get their financing mostly from consumers in Kenya, who bear 75% of the financial

responsibilities in the country. The total bank deposits were KES 3.616 trillion in June 2020 (CBK, 2020). According to the Central Bank of Kenya surveillance reports from 2000 to 2020, the amount of deposits has increased. Deposits increased by about 1,138% to more over 3,616 billion by the end of 2020, from KES 292 billion as at June 2000 (CBK, 2000; CBK, 2020).

## **1.2 Research Problem**

A country with a higher savings rate experiences faster economic growth than a country with a lower saves rate. In addition to offering an extra income stream for countries (Ribaj, Meçe, Cinaj & Kadrimi, 2020), capital accumulation gives more options for production and productivity in a country. In this connection UNCTAD (2004) stresses that saves are mostly driven by the increase in the domestic capital in order, so as to ensure that the capital is invested in the best productive practices, emerging nations should place a priority on domestic saving-boosting measures. In order for the economy to thrive, governments must adopt a variety of economic policies, including increased savings, investment encouragement, and increased domestic output (Rasmidatta, 2011).

Emerging countries have a much stronger correlation between increased domestic savings and the growth of the country's economy. With many types of financing available at low prices, businesses in industrialized countries do not have to search for investors from outside their country and have a major investment in development, technology and infrastructure. In industrialized countries this correlation is not possible (Budha, 2014; Olapido, 2010). However, as at 2019, Kenya's gross savings expressed as a percentage of GDP was 7.97%. When this is contrasted to the gross savings to GDP ratio of developed countries, it is dismal. For instance, the US, Great Britain, China, Japan, France, and Germany respectively had a gross savings expressed as a percentage of GDP of 18.71%, 13.38%, 24.99%, 27.84%, 23.4%, and 28.5%

respectively, as at 2019 (World Bank, 2019). Thus, despite Kenya being a developed country, it has a lower gross savings to GDP ratio than the sampled developed countries. Despite Budha (2014) and Olapido (2010) assertion, emerging countries are more closely linked to the country's increased internal savings and economic growth than industrialized countries.

The relationship between economic growth and saving has been the subject of numerous studies. In China, Lean and Song's (2008) independent investigation on the relationship between domestic savings and economic growth found that higher savings led to higher growth. According to the study's findings, family and corporate saving are the two main drivers of China's economic growth. Short-term growth in China is positively correlated with its domestic economy, but long-term growth is lacking, which causes businesses to increase their savings. This study has a contextual gap because it wasn't conducted in the setting of impoverished countries. Dhungana (2011) investigated bank deposits, which have a significant impact on the Nepalese economy. The data proved that as deposits in financial institutions go up, GDP and economic growth in the country go up. There is a contextual gap in this study because it was not conducted in the Kenyan context.

Ogege and Shiro (2013) did an analysis on the regional level that looked into the contributions that bank deposits made to the expansion of the Nigerian economy. According to the data, there has been a consistent relationship between bank deposits and economic growth in Nigeria. This study has a contextual gap because it wasn't carried out in the Kenyan environment. Puatwoe and Piabuo (2017) studied the economic growth and banking sector in Cameroon. Research revealed that money supply (M2) economic growth and government expenditure all have a short-term positive association, but private investment and economic growth have a short-term

negative link. There is a strong long-term effect on financial development on economic growth. The analysis lacked a connection between growth of economy and deposits.

In Kenya, Okun (2012) studied how various deposit amounts had impacted on commercial banks' financial performance in Kenya. The study's results demonstrated that the deposits ratio and Return on Assets had a positive and substantial link (ROE). The outcomes of the study also revealed that the deposits ratio and the Return on Assets (ROA) had a favourable and substantial link. Because the study did not link deposits to economic growth, there is a conceptual lacuna in it. Mulu (2014) intended to understand the impact on Kenyan economic growth of commercial bank loans. There is a strong opposite association between the number of loans provided and economic growth, according to the conclusions of the study. However, the research found no statistically significant link between bank loans and economic development. Because the study did not link deposits to economic growth, there is a conceptual lacuna in it.

According to Budha (2014) and Olapido (2010), emerging countries have a much greater relationship than industrialized ones between increased economic growth and domestic savings. However, little research has been done on the effects of saving on economic growth, particularly in Kenya and Sub-Saharan Africa. The local studies that have been evaluated have not found any correlation between deposits, a proxy for savings, and economic growth; this conceptual gap was filled in the current study by addressing the research question, "What is the impact of savings on Kenya's economic growth?"

### **1.3 Research Objective**

The main goal of this study was to determine how savings in commercial banks affected Kenya's economic expansion.

### **1.4 Value of the Study**

The results of this study is relevant to several stakeholders including academics, researchers, government agencies, and financial organizations, among others. It is expected that the new studying has a direct impact significantly to the currently available body of knowledge and help to anticipate future economic development based on savings levels. Essentially, other researchers can take this study as precedent in the future. Additionally, it will boost the depth and value of research studies and publications. In terms of learning and increasing the knowledge base on the study parameters, the study findings are beneficial.

The study will be very helpful in developing policies. The new study will support the CBK's and Kenya's Treasury's arguments for mobilizing savings to promote economic growth. The study will be helpful to legislators and policy makers when they are establishing and updating laws and regulations. Such recommendations and policy drafts will be more pertinent and high-quality thanks to the insightful information provided by this study. The quality of policies and laws will be guaranteed with sound policy drafts and regulatory framework.

Financial institutions' managers will learn from the current study findings to launch massive deposit mobilization so they can have capital to make investments and thus boost their financial performance. When savings also consequently improve on growth of economy, the economic growth will also have a subsequent implication on the financial institutions' performance. The

general public can be motivated by the current study findings to increase their savings rate in order to spur economic growth.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

In order to better comprehend the concepts, organizational structures, and empirical studies on the effects of bank deposits on economic growth, this chapter offers insights into the theories of savings and economic growth. The significance of this chapter resides in its identification of the most likely knowledge gaps in previous academic research on the effect of savings on economic growth.

### **2.2 Theoretical Foundation**

The author's original research on the connection between saving and national economic growth is the main subject of this analysis of the literature. This research was done by other academics. In-depth comprehension of related concepts is covered in this section, which also discusses the study's limitations and provides a framework on which the findings will be built. Since they specify the pertinent phenomena and guiding principles, the different sections rely largely on theories. The theoretical framework provides guidance for the project or business activity and shows how various ideologies interact (Lyon, 1977). The study focused on the dependency ratio, marginal saving propensity, and the Harrod-Domar growth theories.

#### **2.2.1 Marginal Inclination to Save Theory**

Keynes proposed the marginal inclination to save theory (1936). According to the notion, revenue growth leads to an increase in the savings rate. It goes on to say that when it comes to savings and economic growth, a rise in total savings will improve investment and promote growth, since emerging nations rely on bank savings the most for financial resources, this is especially relevant in those nations. Low savings rates, according to the hypothesis, also contribute to fiscal deficits and a negative balance of payments (Keynes, 1936).

Savings' beneficial role in fostering economic growth was refuted by Keynes' theory of economic growth, which was put forth in 1936. According to the theory's postulate on the paradox of thrift, an economy gets poorer the more people want to save. However, by linking savings to the buildup of financial assets, authors like Pigou (1936), Robertson (1940), Hazlitt (1959), McKinnon (1973), Case and Fair (1989), Barro (1993), Boyes and Melvin (1990), and Edwards (1991) reaffirmed the beneficial impact of savings on economic growth.

The theory ties to the study because it proposes that the sum of all savings will enhance investment and economic growth, which is especially noticeable in emerging countries because savings placed in commercial banks are the most important source of financial capital. The current study is going to be conducted in the Kenyan context, which is a developing country, and will analyse the effect of level of deposits in commercial banks, as savings deposited in commercial banks are the most common source of financial capital in underdeveloped countries. The Keynes (1936) theory of economic growth statement that that the greater is the desire to save in an economy, the poorer it becomes, might have been referring to the developed economies context and not the developing countries context.

### **2.2.2 Dependency Ratio Theory**

Rodriguez (1988) presented the dependence ratio theory. According to the theory, countries with larger percentages of children or retirees will have a lower ability to save, resulting in a smaller relative size of the economically productive population and, as a result, a lower country's productivity. Dependence can be connected to economic performance via impacting savings, which is an important part of the neoclassical growth model. Dependents, such as the elderly and children, are usually supported by government transfers, which are paid by taxes and government assets, or by in-house family care. As the number of dependents in a home

grows, so does the spending rate, which reduces savings. In addition, as a dependence of the home rises, the time needed to look after the workers increases, and the time for paid workforce decreases (Fayissa & Gutema, 2010).

According to Rossi (1989) more resources are made accessible, increasing the per-capita rate of growth in income, as the dependency ratio lowers. However, this condition requires a more favourable economic environment. In particular, the level of resources released must be invested precisely in this economy without any outflow or leak. Moving resources cannot achieve the projected growth advantage from a reduction in dependency, consciously or unintentionally, to other economies. Debt services and unfavourable trade terms are to blame for the lack of profits from reliance reduction due to financial crises (World Bank, 2002; Bloom, Canning & Sevila, 2001).

Because it links savings to economic growth, the theory is important to the present study. According to the hypothesis, countries with larger percentages of children or retirees will have a lower ability to save, resulting in a smaller relative size of the economically productive population and, as a result, a lower country's productivity. The total demographic dependency ratio in developing nations fell from 0.93 in 1991 to 0.81 in 2020. The total reliance ratio in developed countries, on the other hand, has decreased somewhat from 0.50 in 1990 to 0.49 in 2020 (World Bank, 2020). The high dependency ratio in the developing countries could explain the low levels of economic development exhibited which could be as a result of the consumption rate per household increasing and thus suppressing the savings rate and also the amount of time it takes to look after dependents increasing and consequently the amount of time that is available for working members of the labour force reducing and subsequently resulting in suppressed savings rates.

### **2.2.3 Harrod-Domar Growth Theory**

Harrod (1939) and Domar (1946) created the Harrod-Domar development theory independently, albeit Cassel (1924) proposed a similar concept. According to the theory, if the rate of nation's saving can be raised from a low to a high level, GDP growth will increase as well. As a result, increasing investment and nation's saving is the sole mechanism for economic development and growth. As a result, a positive link between the real GDP growth and savings rate is projected.

The Harrod-Domar model, on the other hand, was based on post-World War II industrialized countries. Harrod (1960) eventually came to regret his approach, claiming that it failed to account for long-term growth rates. The Harrod-Domar growth hypothesis also ignores aspects like labor productivity, technological innovation, and levels of corruption; at best, it is an oversimplification of complicated economic dynamics. As a result, despite a dearth of savings, certain countries, such as Thailand, have seen fast development rates (Boianovsky & Hoover, 2014).

The findings of the current study might be understood in light of the theory because it addresses the relationship between growth of economy and savings. Growth in the GDP will increase if the national savings rate is raised from a lower level to a greater one. Thus, Kenya can target to increase its national savings in order to boost its economic growth. When it increases its national savings, it will consequently increase its investments thus subsequently boosting its economic growth.

## **2.3 Determinants of Economic Growth**

The various economic growth determinants will be elaborated in this section. These are: deposits, and prevailing interest rates, foreign direct investments, exchange rate fluctuations and gross capital formation.

### **2.3.1 Savings**

Saving is disregarding a portion of one's present income for future use or the flow of resources accumulated in the long run. Savings might take the shape of increased bank deposits, securities purchases, or cash holdings (Basu, Inklaar & Wang, 2011). Banking deposits are the funds that have been put with financial institutions for security purposes such as saving accounts, checking accounts and money-market accounts. A person holding an account agreement according to the terms and conditions is entitled to withdraw deposited monies (Fixler, 2009). According to Diewert (2011), a deposit is money retained or held in a bank account for the purpose of accumulating interest. To understand the two types of bank deposits, check out Basu, Inklaar, and Wang (2011). A demand deposit is an account where the depositor has the right to withdraw cash from the account without prior notification or with less than seven days' notice. Financial institutions for a defined amount of time hold time deposits, also known as interest-bearing deposits, and the depositor must give a certain amount of time to withdraw their money.

The marginal disposition to save theory claims that in developing countries, savings deposited in commercial banks are the most important source of financial capital (Keynes, 1936). Economies in countries with higher savings rates expand quicker than those in countries with lower savings rates. Capital accumulation provides a country with more prospects for productivity and production by giving an extra revenue stream (Ribaj, Meçe, Cinaj, & Kadrimi,

2020). In this regard, UNCTAD (2004) highlights that boosting domestic savings is the most important component in increasing in-country capital, and that developing country should prioritize domestic savings programs in order for capital to be spent in the most productive ways. As a result, in order to attain growth of economy, governments must implement a variety of policies, including encouraging savings, supporting investment, and growing domestic production (Rasmidatta, 2011).

In comparison to developing nations, developed nations have adopted superior strategies and have a far stronger correlation between rising domestic savings and faster economic growth. Businesses in industrialized nations do not need to seek out foreign investors since they have access to a wide range of low-cost financial resources as well as large investments in research, development, and technology. This relationship doesn't exist in industrialized nations (Budha, 2014; Olapido, 2010).

### **2.3.2 Foreign Direct Investments**

In order to have influence over the production, distribution, and other operations of the target country, persons from one country, known as the source country, invest in businesses located in another, referred to as a target country, through the process of foreign direct investment (FDI) (Wang & Wong, 2009). Foreign direct investment is an investment made with the intention of acquiring a long-term stake in a company operating in a different economy and the investor's desire to exercise significant influence over the company's management (FDI).

Foreign direct investment and economic growth are significantly positively correlated, according to research. Mengistu & Adams (2007) state the following on employment creation: (Al-Iriani & Al-Shamsi, 2009). Al-Iriani and Al-Shamsi (2009) claim in their book that FDI is essential for capital formation in developing nations as well as for the transfer of knowledge

and technology. According to Sylwester (2005) and Agosin (2000), FDI can spur an increase in domestic investment, which boosts the nation receiving the investment's overall economic development.

Rahman (2015), on the other hand, reached a contrary conclusion, contending that foreign investment has a detrimental effect on economic growth. Rahman concludes that the rise in FDI has not been associated with Bangladesh's favorable growth and that this may be due to Bangladesh's limited ability to absorb capital input. The degree of human capital, infrastructure, and political environment all have a big impact on how much an economy can absorb. According to Fry (1999) and Hermes and Lensink (2003), FDI has slowed local investment and national savings in a number of emerging nations, which has hampered economic growth.

### **2.3.3 Gross Capital Formation**

Gross Capital Formation (GCF) is the total of domestic producers' purchases minus their disposals of fixed assets over an extended period of time, as well as an increase in the recognized value of their non-produced assets as a result of productive activity. Assets used to produce machinery, structures, transportation devices, and intellectual property like software or R&D outcomes for more than a year are referred to as fixed assets (Eurostat, 2013). Tyler (1981) examined 55 rising nations and discovered that exports and investments had a significant impact on economic growth. In 94 non-OECD countries, Bond et al. (2007) presented evidence showing that investing a major portion of income in growth results in higher worker output and longer-term growth.

#### **2.3.4 Exchange Rate Fluctuations**

A floating exchange rate regime, which is frequently prevalent in countries that have experienced deregulation, is the cause of exchange rate fluctuations. Numerous technical and fundamental factors have an impact on exchange rates. Only a few of these elements include capital flow, inflation rate estimates, interest rate changes, support and resistance levels, and economic performance. Because these factors are always shifting, the value of currencies changes (Kandil & Mirzaie, 2002).

Large currency changes have the potential to have a significant influence on the economy as a whole. However, each country experiences the effects of exchange rate fluctuations on economic growth differently. One factor that influences how exchange rate changes impact economic growth is a country's financial market maturity, and longer-term.

#### **2.3.5 Prevailing Interest Rates**

A proportion charged for the usage of borrowed funds is known as the interest rate. It is the monetary opportunity cost (Ngugi & Wambua, 2004). According to Howels and Baikin (2008), the interest is paid to lenders (surplus units) by borrowers to reward savers and lenders for splitting money over a fixed period of time, generally stated on days, months or years and at a risk. The essential role of interest rates, according to Ngugi and Kabubo (1998), is to help mobilize financial means and to enable efficient and effective use of resources in the search for economic growth and development. For a specified length of time, the rates of interest are payable on deposits (deposit rate) and the rates of deficit loans (lending rate). Deposit rate savings, calls and time deposits are included, while loan rates include overdrafts, overnight borrowings and duration loans, sometimes referred to as long-term borrowing (Ngugi & Wambua, 2004).

A floating exchange rate regime, which is frequently prevalent in countries that have experienced deregulation, is the cause of exchange rate fluctuations. Numerous technical and fundamental factors have an impact on exchange rates. Only a few of these elements include capital flow, inflation rate estimates, interest rate changes, support and resistance levels, and economic performance. Because these factors are always shifting, the value of currencies changes (Kandil & Mirzaie, 2002).

Large currency changes have the potential to have a significant influence on the economy as a whole. However, each country experiences the effects of exchange rate fluctuations on economic growth differently. One factor that influences how exchange rate changes impact economic growth is a country's financial market maturity, and longer-term.

## **2.4 Empirical Review**

Budha (2014) used the Autoregressive Distribute Lag (ARDL) method to investigate the link among growth, domestic savings, and investments in Nepal, an emerging economy, on a global scale. Budha's research was based on yearly released data from 1974 to 2010. We used multiple regression analysis and granger causality. The empirical findings of the study revealed that gross domestic product, domestic savings and investment are all co-integrated. In the short run, there is a two-way causation between GDP and domestic savings, according to the study's findings. The similar conclusion was reached when it came to investments and GDP. Because the study was not conducted in Kenya, there is a contextual gap.

Dhungana (2011) studied Nepalese bank deposits and their impact on the country's growth in economy between 1990 and 2010. The study relied on correlation analysis and descriptive statistics. The outcomes of the study revealed that bank deposits and GDP had a significant

positive association. According to the study, the higher the deposit level of financial institutions, the higher the nation's GDP and economic growth. Because the study was not conducted in Kenya, there is a contextual gap. Furthermore, regression models were not used in the study, resulting in a methodological flaw.

Hundie (2014) examined connection among saving, investing, and economic growth. Annual data from the years 1969–1970 and 2010–2011 were used to conduct the research. The majority of the tests were co-integration tests. The outcomes of the study demonstrated that gross domestic product, gross domestic investment, and gross domestic saving were all co-integrated. Furthermore, both long and short term investments have a considerable favorable implications on economic growth, according to the data. Because the study was not conducted in Kenya, there is a contextual gap. Furthermore, regression models were not used in the study, resulting in a methodological flaw.

Ribaj and Mexhuani (2021) investigated the association between economic growth and saving. Both qualitative and quantitative research approaches were used in this study. The study included data from the years 2010 to 2017. The statistical analytic methods used were ADF tests, Johansen co-integration tests, and Granger causality tests. Deposits had a considerable positive economic impact on Kosovo, according to the findings, because savings encourage investment, output, and employment, resulting in more sustainable economic growth. The outcome of the study also revealed that loans and remittances have a direct impact on investment, which helps to develop Kosovo's economy. According to the study, countries with a high national savings rate are less reliant on FDI, and so the risk of variable FDI is reduced greatly. Because the study was not conducted in Kenya, there is a contextual gap. Furthermore, regression models were not used in the study, resulting in a methodological flaw.

Rahman and Uddin (2012) examined the part that saving has played in accelerating Bangladesh's economic growth and assessed the effects of the various factors in Bangladesh's determination of savings and economic growth, with particular emphasis on the impact of financial sector reform at the end of the 1980s. The results of the study show the positive effect on the saving rates of the rate of growth and the actual interest rate. Furthermore, it showed a significant positive influence on the savings rate by using a financial reform index as a stupid variable, suggesting that reform of the financial sector boosted Bangladesh's savings rate. On the other side, population per scheduled bank branch was negatively connected to saving rate, implying that increasing availability of bank branches can encourage people to save. Financial savings, foreign direct investment, and literacy rate all have a considerable favorable impact on economic growth, according to the study's outcome. Because the study was not conducted in Kenya, there is a contextual gap. Furthermore, regression models were not used in the study, resulting in a methodological flaw.

On the regional level, Ogege and Shiro (2013) investigated into the influence of bank deposits on the Nigerian economy's growth. The research was based on time series data spanning the years between 1974 and 2010. The structural analysis, error correction model and co-integration were all used. The outcomes of the study demonstrated that bank deposits and economic growth have a long-term association. The study's findings were found to be consistent with the economic a priori expectation. Because the study was not conducted in Kenya, there is a contextual gap. Furthermore, regression models were not used in the study, resulting in a methodological flaw.

Puatwoe and Piabuo (2017) looked into how financial development affected Cameroon's economic expansion. This study examined three common financial development indicators:

wide cash, deposit, GDP, and domestic private sector loans. Based on an Auto-Regressive Distributive Lag (ARDL) technique, a short-term positive correlation between the monetary mass (M2), government spending, and economic growth was found. the short-term inverse link between private investment, bank deposits, and economic growth. However, over the long run, economic growth was positively and significantly impacted by all financial development indexes. This study did not look at how savings or bank deposits affect economic growth. There is a conceptual gap as a result..

Okun (2012) investigated the impact of deposit levels on banks' financial performance in Kenya. A causal research design was embraced. The study relied on secondary data, with an annual unit of analysis. The information was gathered between the years of 2004 and 2011. The study's findings revealed that the Deposits Ratio and ROE had a favourable and substantial association. Further research revealed that the Return on Assets (ROA) and Deposits Ratio have a favourable and substantial link. The impact of bank deposits or savings on economic growth was not examined in this study. As a result, there is a conceptual chasm.

Mulu (2014) wanted to know how loans offered by commercial loans affected growth of economy in Kenya. The statistical analysis approaches used were correlation and linear regression. The study included data from the years 2008 to 2012. According to the findings of the study, there was a substantial negative association between the rate of change in loan amounts given and economic growth. Further research indicated a statistically negligible negative relationship between Kenyan economic development and changes in lending by Kenyan commercial banks. The implication of bank deposits or savings on economic growth was not examined in this study. As a result, there is a conceptual lacuna.

## 2.5 Conceptual Framework

A conceptual framework for research questions and goals, according to Rocco and Plakhotnik (2009), builds the framework by enclosing the investigation in a relevant knowledge structure. Because the structure is so clearly displayed, the researcher can deduce information from it. The main independent variable in this study will be bank deposits, with changes in exchange rates, foreign direct investments (FDI), gross capital formation (GCF), and the study's control variables, current interest rates, following. The dependent variable in this study will be economic growth. Figure 2.1 presents the conceptual framework developed for this investigation.

### Determinants of Economic Growth

#### Independent Variable

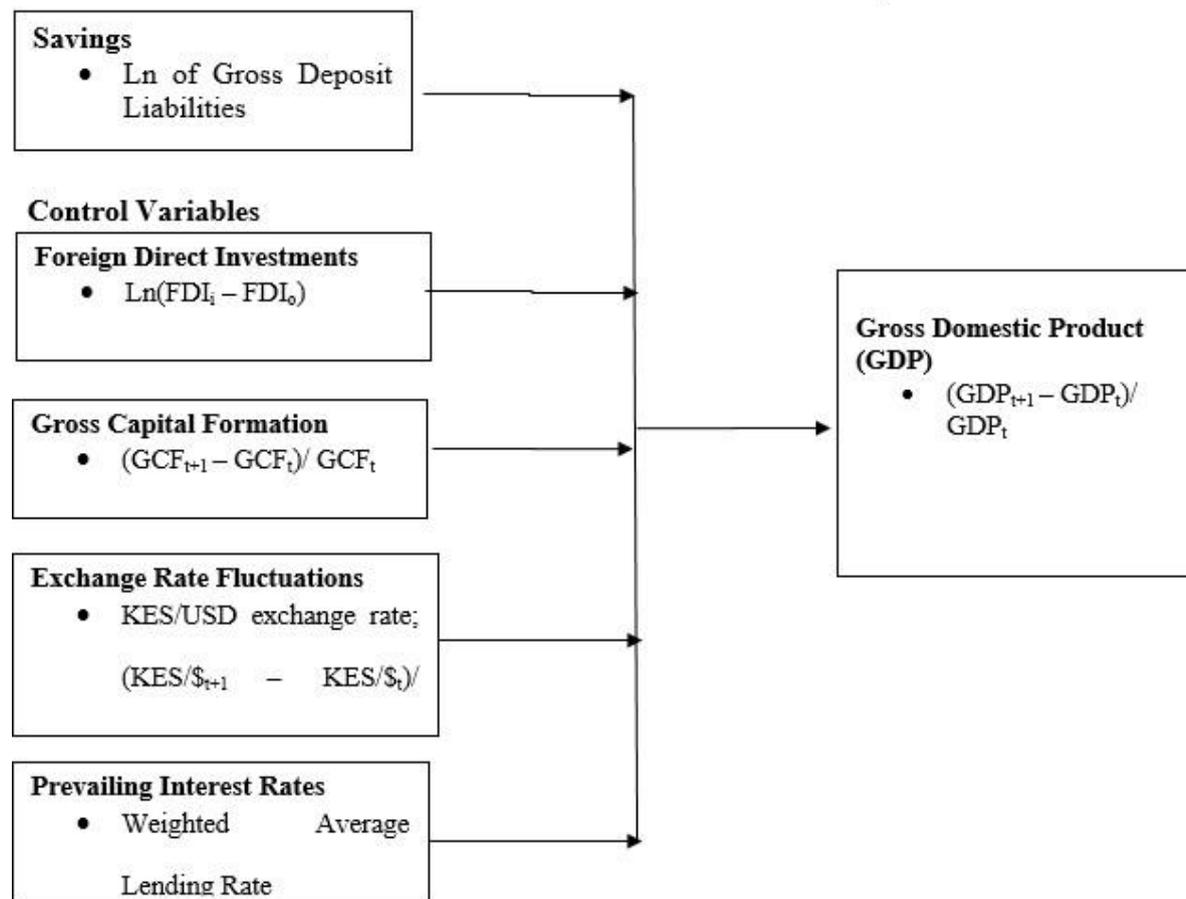


Figure 2.1: Conceptual Model

## **2.6 Summary of Research Gaps**

According to Budha (2014) and Olapido (2010), developing countries have a considerably stronger connection between economic growth and increased domestic savings than developed countries. However, few researches on the effect of savings on economic growth in poor nations have been done, with a specific focus on Sub-Saharan Africa and Kenya in particular. In the local studies reviewed, none has related deposits, as a proxy of savings, to economic growth thus presenting a conceptual lacuna that the current study is intending to fill.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

By detailing the research study's methodology, this chapter acts as its blueprint. This chapter is divided into various subsections, including target population, which outlines the population of interest, research design, which elaborates on the design appropriate to the study, and applicable sampling method, if any. Additionally, the definition of the necessary data and the procedure for gathering it are looked at. The chapter comes to a close with an example of the researcher's chosen method for data analysis.

### **3.2 Research Design**

Since determining the causes and effects of the study variables was the primary goal, the researcher adopted a causal research design for this study. The design was used because it explored the relationship between the study objectives, which addressed the goal of the research. This study met the criteria for a formal study since it drew on relevant theories and utilized a variety of sources of information. Additionally, since the variables were measured rather than altered, it was an ex-post facto research study. The nation served as the study's unit in a field setting. This design takes into account things like the research approach, the variables used, and data gathering techniques.

### **3.3 Data Collection**

The method used to collect the data is important since it affects the reliability of the findings. In this situation, the researcher used secondary data. GDP, deposit liabilities, the weighted average lending rate, KES to USD exchange rates, and CFI and FDI outflows and inflows were all the subjects of data collection. The World Bank data banks, the Kenya National Bureau of Statistics (KNBS), and publications from the Central Bank of Kenya provided the study with

the necessary information (CBK). The research used secondary sources of data. The study made use of longitudinal/time-series data, which were gathered annually from 1984 to 2020 during a period of 37 years.

### **3.4 Data Analysis**

To make analysis, interpretation, and comprehension easier, the data was sorted, tabulated, and simplified. The statistical analysis tool Statistical Package for Social Sciences (SPSS) Version 25 was used to analyse the panel data after data organization. Multiple linear regression and correlation analyses were done. Correlation analysis could be used to assess the strength and link between the independent and dependent variables in the study. On the other hand, regression analysis was utilized to evaluate the significance of the link between the research variables. Tables were used to present the quantitative findings.

#### **3.4.1 Diagnostic Tests**

Numerous presumptions are made in order to ensure the accuracy of the linear regression models. The other assumptions are the absence of multi-collinearity, random observation sampling, a zero conditional mean, a linear regression model with linear parameters, spherical errors devoid of autocorrelation and homoscedasticity, and the optional assumption of normal error term distribution. According to the Gauss-Markov Theorem, the best OLS Regression estimators are those based on the first five assumptions of a linear regression model (Grewal et al., 2004). These underlying assumptions are essential for performing regression; if any of them are violated, the regression estimates become unreliable and erroneous. The interpretation of the regression estimates would be incorrect due to a specific violation, and the variance of the estimate would be inaccurate, leading to extremely wide confidence ranges

To confirm that the assumptions are accurate and the best linear unbiased estimators are available, the researcher should conduct diagnostic tests. Regression diagnostics evaluate the assumptions behind the model and look for any interpretations that have a substantial, unjustified impact. The acquired data was put through diagnostic tests for autocorrelation, multicollinearity, linearity, and normality to see if it was appropriate to run a linear regression model. To ascertain whether a distribution was normal, the Shapiro-Wilk and Kolmogrov-Smirnov tests were applied. When testing Gaussian distributions with known variance and mean, these tests work well. Linearity implies a direct proportional relationship between the dependent and independent variables, which is followed by a corresponding variance in the dependent variable. (2006) Gall and others.

To test for multicollinearity, Variance Inflation Factors (VIF) and Tolerance tests were used, and they revealed whether the predictor variables significantly correlated with one another. According to Grewal et al. (2004), having small sample sizes, low measure reliability, and few explanatory factors in the independent variables are the main causes of multicollinearity. Autocorrelation was investigated using the Durbin-Watson statistic.

### **3.4.2 The Model of Analysis**

Multiple linear regression analysis was used to achieve the research goals by determining whether the independent variables have any effect on economic growth. The statistical tests were run at a 95% level of significance, which suggests an error margin of up to 5%. The model shown below was used;

$$Y_{(t)} = \alpha + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + \beta_5 X_{5t} + \epsilon$$

Where:

$Y_{i(t-1)}$  = Economic Growth

$\alpha$  = Constant

$\beta_1 - \beta_4$  = Beta coefficients

$X_{1t}$  = Savings

$X_{2t}$  = Foreign Direct Investments

$X_{3t}$  = Gross Capital Formation

$X_{4t}$  = Exchange Rate Fluctuations

$X_{4t}$  = Prevailing Interest Rates

$e$  = error term

**Table 3.1: Operationalization of the Study Variables**

Category	Variable	Indicator	Measurement
Independent variable	Savings	Aggregate Non-Deposit Liabilities	Ln Aggregate non-deposit liabilities
Control Variable	FDI	Net FDI inflows	Ln(FDI <sub>i</sub> – FDI <sub>0</sub> )
Control variable	Gross Capital Formation	Change in GCF	(GCF <sub>t+1</sub> – GCF <sub>t</sub> ) / GCF <sub>t</sub>
Control variable	Exchange Rate	Fluctuations in the Exchange rate	KES/USD exchange rate; (KES/\$ <sub>t+1</sub> – KES/\$ <sub>t</sub> ) / KES/\$ <sub>t</sub>
Control variable	Interest Rate	Weighted Average Lending Rate	Weighted Average Lending Rate
Dependent Variable	Economic Growth	GDP Growth	(GDP <sub>t+1</sub> – GDP <sub>t</sub> ) / GDP <sub>t</sub>

# CHAPTER FOUR: DATA ANALYSIS, RESULTS AND INTERPRETATION

## 4.1 Introduction

This chapter's main subjects are the data analysis, discussion, and interpretation of the study's findings. Its four sections include diagnostic tests, inferential statistics, interpretation, and discussion of the study's results.

## 4.2 Diagnostic Tests

Prior to performing linear regression, diagnostic tests were run to guarantee the Best Linear Unbiased Estimators (BLUE). In this investigation, diagnostic procedures including normality tests, homoscedasticity tests, and multicollinearity tests were carried out. The Kolmogorov-Smirnov test and the Shapiro-Wilk test were employed to assess the normality of the distribution. Using the Breusch-Pagan test, homoscedasticity was demonstrated. Tolerance and VIF were selected to demonstrate multi-collinearity.

### 4.2.1 Normality Test

Testing for normal distribution for the research variables is shown in Table 4.1.

**Table 4.1: Normality Test**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
GDP Growth	.137	37	.075	.957	37	.157
Ln Savings	.248	37	.000	.846	37	.000
Ln Foreign Direct Investments	.127	37	.138	.922	37	.013
Δ in GCF	.120	37	.197	.974	37	.524
Exchange Rate Fluctuations	.140	37	.064	.919	37	.011
Prevailing Interest Rates	.168	37	.010	.883	37	.001

#### a. Lilliefors Significance Correction

Table 4.1 shows that the Kolmogorov-Smirnov and Shapiro-Wilk significant values for savings and current interest rates are both less than the value (0.05). As a result, the data series for the variables are not normally distributed. The solution to non-normal data is standardization, so all variable data series were standardized as a way to fix distribution non-normality.

The significance values for the variables GDP growth and GCF, however, are higher than the value in the Kolmogorov-Smirnov and Shapiro-Wilk tests (0.05). The data series for the variables are thus regularly distributed. While the Shapiro-Wilk significance value is smaller than the value, the Kolmogorov-Smirnov significance value for the variable exchange rate swings is more than the 0.05 value (0.05). Additionally, the Kolmogorov-Smirnov significance values for the exchange rate fluctuations and FDI variables are higher than the 0.05 threshold but lower than the 0.05 threshold for Shapiro-Wilk significant values (0.05). Although not frequent, the Shapiro Wilk test does not perform well when dealing with vast amounts of data, which is why the Kolmogorov-Smirnov test is added. The interpretation for the current study is based on the Kolmogorov-Smirnov test because it is the more trustworthy normalcy test. The variables are normally distributed since the variable exchange rate fluctuations' Kolmogorov-Smirnov significance value is higher than the cutoff point (0.05).

#### **4.2.2 Test for Homoscedasticity**

Prior to performing linear regression, diagnostic tests were run to guarantee the Best Linear Unbiased Estimators (BLUE). In this investigation, diagnostic procedures including normality tests, homoscedasticity tests, and multicollinearity tests were carried out. The Kolmogorov-Smirnov test and the Shapiro-Wilk test were employed to assess the normality of the

distribution. Using the Breusch-Pagan test, homoscedasticity was demonstrated. Tolerance and VIF were selected to demonstrate multi-collinearity.

**Table 4.2: Test for Homoscedasticity**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.000	5	.000	1.267	.303 <sup>b</sup>
	Residual	.000	31	.000		
	Total	.000	36			

a. Dependent Variable: RES\_1\_SQ

b. Predictors: (Constant), Prevailing Interest Rates,  $\Delta$  in GCF, Exchange Rate Fluctuations, Ln Savings, Ln Foreign Direct Investments

Because the significance value achieved in the results given in Table 4.2 (0.303) is greater than the  $\alpha$  value (0.05), the data series for all the entire response variables employed in the current study are homoscedastic, as demonstrated by the findings.

#### 4.2.3 Test for Multicollinearity

Table 4.3 shows the results for VIF and tolerance tests to ascertain multi-collinearity.

**Table 4.3: Multicollinearity Statistics**

Model		Collinearity Statistics	
		Tolerance	VIF
1	Ln Savings	.177	5.664
	Ln Foreign Direct Investments	.168	5.935
	$\Delta$ in GCF	.896	1.116
	Exchange Rate Fluctuations	.861	1.162
	Prevailing Interest Rates	.735	1.361

a. Dependent Variable: GDP Growth

Table 4.3 findings reveal all of predictor variables used for the research are more than 0.1 in tolerance, while the VIF value fall between 1 and 10. Thus, the predictor variables in the research do not exhibit multicollinearity.

#### 4.2.4 Tests for Autocorrelation

The result on the autocorrelation test carried out using the Durbin-Watson Statistic is presented on Table 4.4.

**Table 4.4: Autocorrelation Test**

Model	Durbin-Watson
1	1.538 <sup>a</sup>

a. Predictors: (Constant), Prevailing Interest Rates,  $\Delta$  in GCF, Exchange Rate Fluctuations, Ln Savings, Ln Foreign Direct Investments

b. Dependent Variable: GDP Growth

The Durbin-Watson statistic ranges from point 0 and point 4. If there exist no correlation between variables, a value of 2 is shown. If the values fall under point 0 up to a point less than 2, this is an indication of a positive autocorrelation and on the contrast a negative autocorrelation exist if the value falls under point more than 2 up to 4. As a common rule in statistics, values falling under the range 1.5 to 2.5 are considered relatively normal whereas values that fall out of the range raise a concern. Field (2009) however, opines that values above 3 and less than 1 are a sure reason for concern. Therefore, the data used in this panel is not serially auto-correlated since it meets this threshold having a Durbin-Watson Statistic of 1.538.

#### 4.3 Inferential Statistics

The relationship, strength and direction of the link between the response and predictor variables are determined using inferential statistics. This section contains inferential statistic used in this research, which comprise of the multiple linear regression and correlation analyses.

##### 4.3.1 Correlation Analysis

Measurements of two or more factors are used in correlation analysis to control or determine the level of association between the values of the variables (Higgins, 2005). Correlation, which

spans from -0.1 to +0.1, is a metric used to determine the strength and connectivity of a linear association between two parameters (Skeran & Roger, 2009). The ratio scale of measurement was used in the current investigation, hence Pearson's correlation, denoted by (rs), was applied. While Pearson correlation determines the strength of the relationship between continuous variables, Spearman correlation is typically used to assess connections with ordinal variables (Hauke & Kossowski, 2011). The results are summarized in Table 4.5.

**Table 4.5: Correlation Analysis**

		<b>GDP Growth</b>	<b>Ln Savings</b>	<b>Ln Foreign Direct Investments</b>	<b>Δ in GCF</b>	<b>Exchange Rate Fluctuations</b>	<b>Prevailing Interest Rates</b>
GDP Growth	Pearson Correlation	1	.473**	.436**	.392*	-.174	-.021
	Sig. (2- tailed)		.003	.007	.017	.303	.903
Ln Savings	Pearson Correlation	.473**	1	.884**	.317	-.333*	-.239
	Sig. (2- tailed)	.003		.000	.056	.044	.155
Ln Foreign Direct Investments	Pearson Correlation	.436**	.884**	1	.259	-.241	-.417*
	Sig. (2- tailed)	.007	.000		.122	.151	.010
Δ in GCF	Pearson Correlation	.392*	.317	.259	1	-.129	-.033
	Sig. (2- tailed)	.017	.056	.122		.448	.846
Exchange Rate Fluctuations	Pearson Correlation	-.174	-.333*	-.241	-.129	1	.136
	Sig. (2- tailed)	.303	.044	.151	.448		.422
Prevailing Interest Rates	Pearson Correlation	-.021	-.239	-.417*	-.033	.136	1
	Sig. (2- tailed)	.903	.155	.010	.846	.422	
	N	37	37	37	37	37	37

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

The null hypothesis states that there is no significant correlation, while the alternative hypothesis states that there is a significant link. At the 95% confidence interval, the null hypothesis will be rejected if any predictor variable's significance level is less than or equal to (0.05), but it cannot be rejected if any predictor variable's significance level is greater than or equal to (0.05). (0.05).

Savings, FDI, and GCF are substantially connected with economic growth at the 5% significance level, according to Table 4.5's findings. This is as a result of their significance values being lower than the (0.05). Table 4.5 further shows that, at the 5% level of significance, there is no meaningful relationship between exchange rate swings and the current interest rates and economic growth. This is as a result of their significance values exceeding the (0.05).

#### **4.3.2 Multiple Linear Regression Analysis**

A multivariate linear regression model was used to evaluate the relationship between the predictor variables and control variables used in the current investigation and the response variable. Standardization of the data series was carried out as a remedy for correcting non-normal distribution because the predictor variable, savings, and control variables, FDI, and current interest rates were not normally distributed as shown in the Shapiro-Wilk and Kolmogorov-Smirnov tests displayed in Table 4.1.

The multiple linear regression analysis used a significance threshold of 5%. The significance values obtained from the study analysis were compared to the crucial values shown in the Analysis of Variance (ANOVA) and model coefficients. The study analysis's F-value and T statistics results were also compared to the corresponding critical values.

**Table 4.6: Multiple Linear Regression**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.554 <sup>a</sup>	.306	.195	.020067682570032		
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.006	5	.001	2.740	.037 <sup>b</sup>
	Residual	.012	31	.000		
	Total	.018	36			
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.012	.071		-.175	.862
	Zscore: Ln Savings	.004	.008	.193	.544	.591
	Ln Foreign Direct Investments	.002	.003	.246	.675	.504
	$\Delta$ in GCF	.035	.021	.267	1.689	.101
	Exchange Rate Fluctuations	-.032	.147	-.035	-.219	.828
	Zscore: Prevailing Interest Rates	.003	.004	.142	.813	.423

a. Dependent Variable: GDP Growth

a. Predictors: (Constant), Zscore: Prevailing Interest Rates,  $\Delta$  in GCF, Exchange Rate Fluctuations, Zscore: Ln Savings, Ln Foreign Direct Investments

a. Dependent Variable: GDP Growth

b. Predictors: (Constant), Zscore: Prevailing Interest Rates,  $\Delta$  in GCF, Exchange Rate Fluctuations, Zscore: Ln Savings, Ln Foreign Direct Investments

According to R Square (Coefficient of Determination), changes in the response variable may be seen as a consequence of variations in the predictor variables. Table 4.6 shows that R Square is 0.306, which indicates that the model entailing; savings, FDI, GCF, exchange rate fluctuations, and prevailing interest rates result in 30.6% of the variations in economic growth. Other variables not included in the model account for 69.4% of the deviations in economic growth.

Additional study results shown in Table 4.6 display that the significance value of obtained the current research (0.037) is less than the crucial threshold used in the study (0.05). This means

that the model entailing; savings, FDI, GCF, exchange rate fluctuations, and prevailing interest rates significantly forecasts economic growth. The critical F-value in this research is 2.603, and the F-value in this study (3.117) is greater than the critical F-value. This means that the model entailing; savings, FDI, GCF, exchange rate fluctuations, and prevailing interest rates is adequate to forecast economic growth.

Final study findings in Table 4.6 shows that, savings, FDI, GCF, exchange rate fluctuations, and prevailing interest rates each individually do not have a substantial impact on economic growth. There is a 0.05 significance threshold utilized in the study, and their significance values are all above it. In addition, for a two-tail test the critical T value is  $\pm 2.0423$  and the t values of the variables fall within the range.

#### **4.4 Interpretation and Discussion of Findings**

The purpose of this study was to determine how savings in commercial banks affected Kenya's economic expansion. It also sought to determine how Kenya's economic growth was impacted by FDI, GCF, currency rate volatility, and market interest rates.

The study's findings showed a substantial 5% correlation between savings, FDI, and GCF and economic growth. The study's results also show that, at the 5% level of significance, changes in interest rates and exchange rates are not significantly connected with economic growth. Further research revealed that the model with savings, FDI, GCF, exchange rate changes, and current interest rates predicts Kenya's economic growth to a moderate amount and has a coefficient of determination of 62%. The model that incorporates savings, FDI, GCF, exchange rate variations, and current interest rates also significantly predicts Kenya's economic growth, according to additional research. Savings, FDI, GCF, exchange rate changes, and current

interest rates individually did not have a significant impact, according to the study's conclusions.

The theory of marginal propensity to save developed by Keynes (1936) is the fundamental theory driving this research. Revenue growth, based on the theory, leads to a growth in the savings rate. When it comes to savings and economic development, a rise in aggregate savings would stimulate investment and encourage growth, this is especially the case in emerging countries where the main source is financial capital savings put in commercial banks. Low savings rates can result in fiscal deficits and a negative balance of payments. The other theory guiding this study is the dependency ratio theory proposed by Rodriguez (1988). According to the theory, nations with greater percentages of children or seniors will have a lower capacity to save, resulting in a smaller relative size of the economically active population and, as a consequence, a lower country's productivity. The Harrod-Domar development theory, created separately by Harrod (1939) and Domar (1946), is the ultimate hypothesis that guides this research, albeit a similar model had been suggested by Cassel (1924). The theory is that the nation's savings rate may be increased from low to high, Gross Domestic Growth (GDP) growth will rise as well. As a result, growing national savings and investment is the only mechanism for development and economic growth. As a consequence, a positive connection is expected between growth of real GDP and rate of saving. The current study finding that savings do not have a significant relationship with economic growth contradicts these theories.

Economies in countries with greater savings rates expand quicker than those in countries with lower savings rates. Capital accumulation provides a nation with more possibilities for production and productivity by offering an extra revenue stream (Ribaj, Meçe, Cinaj, & Kadrimi, 2020). In this respect, UNCTAD (2004) stresses that growing domestic savings is the

most important element in expanding in-country capital and for the purpose of capital to be invested in the most productive enterprises, emerging countries should focus on promoting domestic savings. As a result, in order to achieve economic development, governments must implement a variety of policies, including encouraging savings, boosting investment, and expanding domestic output (Rasmidatta, 2011). The current study finding that savings do not have a significant relationship with economic growth contradicts Ribaj, Meçe, Cinaj, and Kadrimi (2020), UNCTAD (2004), and Rasmidatta's (2011) assertions.

Investment, undoubtedly, helps to aggregate growth; nevertheless, without rising savings, investment cannot be increased. A country needs to expand its overall savings to promote sustainable economic development, which will in turn increase investment and growth in GDP. More savings, particularly in emerging countries, contribute to decreased consumption that could also lead to more capital investments and ultimately to higher growth rates (Rasmidatta, 2011). The current study finding that savings do not have a significant relationship with economic growth contradicts Rasmidatta's (2011) assertion.

Solow (1956), who argued that greater savings lead to more investment and increased output, emphasised the necessity of saving economic growth. The idea of saving is crucial for economic developments, as they are contributing to increasing investment, speeding up economic growth, was strengthened by McKinnon (1973) and by Shaw (1973). Other researchers think that consumer customs development has an advantageous association for sustainable economic development between saving and GDP growth in emerging nations (Carroll, Overland, & Weil, 2000). The current study finding that savings do not have a significant relationship with economic growth contradicts Solow (1956), McKinnon (1973), Shaw (1973), and Carroll, Overland, and Weil (2000) assertions.

In addition, Anoruo and Ahmad (2001), who studied the causal relation of domestic economic growth to household savings growth rates by the vector correction model (VECM) and co-integration, have established a long-term association between economic savings growth and economic growth. Thirlwall (2002), studied Egypt's economic growth with regards to exploring the impact of financial liberalization in stimulating saving and investment. The survey found that, in a bid to maintain and enhance its development, the task of raising savings is highly crucial to Egypt. Conversely, Romm (2003) studied with Johansen VECM how private saving and investment interact with growth, and found that domestic saving and deposit growth has an impact on a country's economic growth both directly and indirectly. The current study finding that savings do not have a significant relationship with economic growth contradicts Anoruo and Ahmad (2001), Thirlwall (2002), and Romm (2003) study findings.

Alguacil, Cuadros, and Orts (2004) found that domestic savings are affected by economic growth. This conclusion supported Solow's model, which considers that higher economic growth leads to bigger savings. The current study finding that savings do not have a significant relationship with economic growth contradicts Alguacil, Cuadros, and Orts (2004) study finding and is also not in agreement with the Solow's.

Misztal (2011) suggested that growth of GDP and deposit/domestic savings are causally related. The current study finding that savings do not have a significant relationship with economic growth is not in tandem with Misztal (2011) assertion.

Budha (2014) and opined that in low-and middle-income nations, increased domestic savings is linked with increased economic growth. The current study finding that savings do not have a significant relationship with Kenya's economic growth is not in tandem with Budha's (2014)

assertion. Olapido (2010) had a contrary opinion that with many types of money available at low prices, businesses in industrialized countries do not have to search for investors from outside their country and have a major investment in development infrastructure and technology. In industrialized countries this correlation is not possible. The current study finding that savings do not have a significant relationship with economic growth is congruent to Olapido's (2010) assertion.

Dhungana (2011) studied Nepalese bank deposits and their impact on the country's growth in economy. The outcomes of the study revealed that bank deposits and GDP had a significant positive association. According to the study, the higher the deposit level of financial institutions, the higher the nation's GDP and economic growth. The current study finding that savings do not have a significant relationship with economic growth is not in sync with Dhungana's (2011) study finding.

Hundie (2014) examined connection among saving, investing, and economic growth. The outcomes of the study demonstrated that gross domestic product and gross domestic saving were all co-integrated. Furthermore, both long and short term investments have a considerable favorable implications on economic growth, according to the data. The current study finding that savings do not have a significant relationship with economic growth is not in sync with Hundie's (2014) study finding.

Ribaj and Mexhuani (2021) investigated the association between economic growth and saving. Deposits had a considerable positive economic impact on Kosovo, according to the findings, because savings encourage investment, output, and employment, resulting in more sustainable economic growth. According to the study, countries with a high national savings rate are less

reliant on FDI, and so the risk of variable FDI is reduced greatly. The current study finding that savings and FDI do not have a significant relationship with economic growth is not in sync with Ribaj and Mexhuani's (2021) study findings.

Rahman and Uddin (2012) examined the part that saving has played in accelerating Bangladesh's economic growth and assessed the effects of the various factors in Bangladesh's determination of savings and economic growth, with particular emphasis on the impact of financial sector reform at the end of the 1980s. The results of the study show the positive effect on the saving rates of the rate of growth and the actual interest rate. Furthermore, it showed a significant positive influence on the savings rate by using a financial reform index as a stupid variable, suggesting that reform of the financial sector boosted Bangladesh's savings rate. The study concluded that financial savings and foreign direct investment have a considerable favourable impact on economic growth. The current study finding that savings and FDI do not have a significant relationship with economic growth is not in sync with Rahman and Uddin's (2012) study findings.

Ogege and Shiro (2013) investigated into the influence of bank deposits on the Nigerian economy's growth. The outcomes of the study demonstrated that bank deposits and economic growth have a long-term association. The study's findings were found to be consistent with the economic a priori expectation. The current study finding that savings do not have a significant relationship with economic growth is not in sync with Ogege and Shiro's (2013) study finding and also the economic a priori expectation.

Puatwoe and Piabuo (2017) investigated the impact of financial development on Cameroon's economic growth. A short-term negative association was identified, based on an Auto-

Regressive Distributive Lag (ARDL) technique, between bank deposits, private investment, and economic growth. The current study finding that savings, FDI, and GCF do not have a significant relationship with economic growth is not in tandem with Puatwoe and Piabuo's (2017) study finding.

## **CHAPTER FIVE: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS**

### **5.1 Introduction**

An overview of the research results and suggestions for practitioners and decision-makers are provided in this section. The limitations of the study and recommendations for further investigation are also discussed.

### **5.2 Summary of Findings**

This study sought to understand how savings in commercial banks impacted Kenya's economic growth. It also tried to ascertain the effects of FDI, GCF, fluctuating currency exchange rates, and market interest rates on Kenya's economic growth. As a result, the general and detailed objectives that had been established were followed throughout the data analysis and result interpretation.

Both correlation analysis and multiple linear regression were heavily utilized to achieve the study's objectives. An analysis of the connection used in the study shows that savings, foreign direct investment, and gross capital creation are all significantly correlated with economic growth at the 5% level. The study's findings also demonstrate that changes in interest rates and exchange rates do not significantly affect economic growth at the 5% level of significance. The model incorporating savings, FDI, GCF, exchange rate fluctuations, and current interest rates predicts Kenya's economic development to a moderate extent and has a co-efficient of determination of 62%, according to multiple linear regression analysis. The model, which takes into account savings, FDI, GCF, currency rate changes, and current interest rates, forecasts Kenya's economic expansion properly. The study's final findings showed that none of the

variables examined individually—savings, FDI, GCF, exchange rate variations, and current interest rates—had a substantial effect on economic development.

### **5.3 Conclusion**

The research's conclusion is found in this section. Both the study's general purpose and its specific objectives are addressed in the conclusion. The main goal of the study was to determine how savings in commercial banks affected Kenya's economic expansion. Savings and economic growth are significantly positively associated, but not significantly related, according to the study's findings. The current study also sought to determine how Kenya's economic growth was impacted by FDI, GCF, exchange rate volatility, and market interest rates. According to the study's findings, economic growth and FDI and GCF have a substantial positive link but no meaningful relationship. The study's final finding was that there is little correlation between economic growth and changes in interest rates or exchange rates.

### **5.4 Recommendations**

The findings of this study about savings and economic growth will be useful to those who do future research in the field of finance. The study's findings will serve as a guide for future researchers looking into savings and economic expansion. Researchers will be intrigued by the work and challenged to conduct additional research on economic growth. Likewise, the work will offer useful information for future researchers and scholars interested in the topic of savings and economic growth.

Government officials, Treasury policy makers, and legislators are advised to refrain from focusing primarily on saves in order to promote economic growth because it has been demonstrated that savings have no appreciable impact on economic growth. The other source

of capital for investments, according to Ribaj and Mexhuani (2021), is FDI; nations with low national savings rates are more dependent on FDI. However, the study's conclusion that FDI has no appreciable impact on economic growth leads to recommendations for policymakers not to rely heavily on FDI to promote economic growth. As a result, recommendations are made to the policy makers to take into account all other factors that affect economic growth because it has been determined that. Key government entities and authorities will use the study project findings as a road map as they create policies and procedures to boost the financial industry. The results of the current study will offer empirical data to the government and other pertinent agencies to aid in the development and implementation of pertinent laws and regulations.

The study's conclusion that bank deposits have no discernible impact on economic growth leads to recommendations for financial institution managers and consultants to rely on deposits as their primary source of funding, but they can also look for other non-deposit liabilities to obtain cash to lend to the public and private sectors in order to improve their financial performance. Savings have no direct impact on economic growth, thus they will also not affect how well financial institutions function in the long run. The general populace is finally given advice to not simply depend on raising their savings rate to support economic growth.

### **5.5 Recommendations for Further Study**

For Treasury, legislators, managers of financial institutions, consultants, and those responsible for financial sector regulation, understanding how savings affect economic growth is crucial. The current study was conducted in the setting of bank deposits, but it may be repeated to examine other types of savings, such as market capitalization in Kenya's capital market, to see if the findings are still valid. Additional research may be done in Kenya, in African or

worldwide settings to see if the most recent study's findings are being communicated. The current research has only been done in Kenya.

The only control variables used in the current analysis were FDI, GCF, exchange rate changes, and current interest rates. It is possible to do research to see whether there are any additional factors that interfere, moderate, or mediate the relationship between government bond rates and the performance of a certain equities market segment.

Only secondary data were used in this study; primary data studies can continue the research. This could either support or refute the conclusions of the study. The multiple linear regressions and correlation analyses used in this study's statistical analysis. Further research may incorporate additional statistical analysis approaches, such as descriptive statistics, cluster analysis, discriminant analysis, granger causality, components analysis, and others..

## **5.6 Limitations of the Study**

The current research was a formal study that employed the deductive research method since it was guided by pertinent literature and theories to further assess the theories and empirical literature findings. Using theories and earlier empirical data makes it simpler to set the groundwork for understanding the subject problem under consideration. Prior research on the effect of bank deposits on economic growth, however, was insufficient. It is unclear whether the current conclusion would still be valid if the same study were to be done again taking into account other types of savings, like market capitalization on the Kenyan capital market, since the research was restricted to the context of bank deposits due to time and resource limitations. Furthermore, if similar study were conducted

Although the research used secondary sources of data, there were some significant difficulties, such as some of the data not being easily accessible; in particular, data on exchange rate swings, which required substantial effort and expense to get. The data needed to be further calculated and altered because they were not used in their raw form. Due to data processing and additional editing before the researcher's compilation, impending delays were encountered.

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## APPENDICES

### Appendix 1: List of Commercial Banks in Kenya as at 30<sup>th</sup> December 2020

1. Absa Bank Limited
2. African Banking Corp. Ltd
3. Bank of Africa Kenya Ltd
4. Bank of India
5. Bank of Baroda (K) Ltd
6. Stanbic Bank Ltd
7. Chase Bank (K) Ltd (In Receivership)
8. Citibank N.A.
9. Consolidated Bank of Kenya Ltd
10. Co-operative Bank of Kenya Ltd
11. Credit Bank Ltd
12. Development Bank (K) Ltd
13. Diamond Trust Bank (K) Ltd
14. Dubai Bank Ltd (In Receivership)
15. Dubai Islamic Bank (Kenya) Ltd
16. Ecobank Limited
17. Spire Bank
18. Equity Bank Ltd
19. Family Bank Ltd
20. Guaranty Trust Bank
21. First Community Bank Ltd
22. Guardian Bank Ltd
22. Gulf African Bank Ltd

24. Habib Bank A.G. Zurich
25. HFC Ltd
26. Imperial Bank Ltd (In Receivership)
27. I & M Bank Ltd
28. Jamii Bora Bank Ltd
29. KCB Bank Kenya Ltd
30. Mayfair Bank Ltd
31. Middle East Bank (K) Ltd
32. M Oriental Bank Ltd
33. National Bank of Kenya Ltd
34. NCBA Bank Kenya
35. Paramount Universal Bank Ltd
36. Prime Bank Ltd
37. Sidian Bank
38. Standard Chartered Bank (K) Ltd
39. SBM Bank (Kenya) Ltd
40. Transnational Bank Ltd
41. UBA Kenya Bank Ltd
42. Victoria Commercial Bank Ltd

Source: Kenya Bankers Association Website (2020)

## Appendix II: Data Collection Form

Year	Variable	Economic Growth		Savings		Intra-African FDI				Gross Capital Formation		Exchange Rate		Interest Rate
	Proxy	GDP	GDP Growth	Aggregate Non-Deposit Liabilities	Ln Aggregate Non-Deposit Liabilities	Intra-African FDI Inflows	Intra-African FDI Outflows	Net Intra-African FDI	Ln Net Intra-African FDI	Gross Capital Formation	Δ Gross Capital Formation	US D/KES	Δ USD/KES	Weighted Average Lending Rate
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### Appendix III: Research Data

Year	GDP Growth	Savings	Ln Savings	Foreign Direct Investments	Ln Foreign Direct Investments	Gross Capital Formation	Δ in GCF	Exchange Rate	Exchange Rate Fluctuations	Prevailing Interest Rates
2020	-0.00307	2.53E+12	28.55924	3.259E+11	26.50986	1.6619E+10	0.055042	102.4533	-0.01377	0.13
2019	0.053657	2.10202E+12	28.37392	1.738E+11	25.88117	1.5752E+10	0.048022	103.8833	0.021669	0.090
2018	0.063185	2.52177E+12	28.55598	1.452E+11	25.70138	1.503E+10	0.189982	101.68	0.01097	0.090
2017	0.048057	1.96192E+12	28.30494	1.295E+11	25.58695	1.2631E+10	-0.08073	100.5767	-0.01473	0.090
2016	0.058789	2.05352E+12	28.35058	9.503E+11	27.58004	1.374E+10	-0.00319	102.08	0.013973	0.090
2015	0.057185	2.3121E+12	28.46918	3.145E+11	26.47425	1.3784E+10	0.244307	100.6733	-0.00287	0.090
2014	0.053571	1.9207E+12	28.28371	3.883E+11	26.68504	1.1078E+10	0.02319	100.9633	-0.00636	0.090
2013	0.058787	1.272E+12	27.87161	2.891E+11	26.39004	1.0826E+10	0.189059	101.61	-0.01722	0.095
2012	0.045632	1.12E+12	27.74435	4.196E+11	26.76257	9105052539	0.092207	103.39	-0.00042	0.100
2011	0.061083	1.24E+12	27.84613	3.5528E+12	28.89876	8336379195	0.164749	103.4333	-3.2E-05	0.100
2010	0.084057	2.44163E+12	28.52369	2.166E+11	26.10132	7157229289	0.01665	103.4367	0.001194	0.105
2009	0.033069	1.08541E+12	27.71298	4.193E+11	26.76185	7040012837	0.076836	103.3133	0.013439	0.105
2008	0.002323	1.33446E+12	27.91955	22000000000	23.81431	6537681082	0.358558	101.9433	0.005987	0.115
2007	0.068507	1.1378E+12	27.76012	77900000000	25.07869	4812221224	0.455083	101.3367	0.003102	0.115
2006	0.064725	6.38399E+11	27.18223	41200000000	24.4417	3307179888	0.211345	101.0233	-0.00734	0.115
2005	0.059067	3.89097E+11	26.68709	10800000000	23.10281	2730170839	0.111368	101.77	-0.00297	0.115
2004	0.051043	4.18276E+11	26.75941	9400000000	22.96398	2456584865	0.234258	102.0733	-0.01752	0.115
2003	0.029325	1.43129E+11	25.68701	9200000000	22.94247	1990333858	-0.18433	103.8933	0.070992	0.115
2002	0.005469	1.0453E+11	25.37274	7500000000	22.73817	2440115016	0.102866	97.00667	0.056602	0.115
2001	0.037799	1.25539E+11	25.55588	7200000000	22.69735	2212522399	0.105353	91.81	0.01962	0.085
2000	0.005997	1.84684E+11	25.94191	7600000000	22.75141	2001643769	-0.1492	90.04333	0.017554	0.085
1999	0.023054	2.08857E+11	26.06492	5900000000	22.49822	2352671257	0.184713	88.49	0.012085	0.085
1998	0.032902	1.81302E+11	25.92343	5300000000	22.39097	1985857747	0.098774	87.43333	0.012702	0.085
1997	0.004749	1.79902E+11	25.91568	4600000000	22.24932	1807339241	-0.08438	86.33667	0.002167	0.085

1996	0.041468	2.01751E+11	26.0303	3200000000	21.88642	1973886735	0.431277	86.15	-0.01178	0.085
1995	0.044062	3.0467E+11	26.4425	3100000000	21.85467	1379109055	0.361525	87.17667	0.025809	0.085
1994	0.026328	1.0631E+11	25.38963	1700000000	21.25389	1012915228	-0.27079	84.98333	-0.0175	0.085
1993	0.003532	1.8881E+11	25.96401	987000000	20.71018	1389053537	-0.18741	86.49667	0.0091	0.095
1992	-0.00799	1.87484E+11	25.95696	756000000	20.44355	1709407116	-0.17477	85.71667	0.013159	0.095
1991	0.014383	1.97164E+11	26.0073	623000000	20.25006	2071432832	0.005865	84.60333	-0.00185	0.130
1990	0.041921	1.90512E+11	25.97298	528432800	20.08543	2059354393	-0.03151	84.76	0.014604	0.165
1989	0.041082	1.75271E+11	25.8896	502011160	20.03413	2126364307	0.06383	83.9124	0.030928	0.153
1988	0.04026	1.61249E+11	25.80622	476910602	19.98284	1998782449	0.052632	81.39503	-0.01961	0.143
1987	0.039455	1.48349E+11	25.72283	453065071.9	19.93155	1898843327	0.030928	83.02293	0.075269	0.133
1986	0.038666	1.36481E+11	25.63945	430411818.3	19.88025	1841878027	0.086957	77.21132	0.020408	0.123
1985	0.037893	1.25563E+11	25.55607	408891227.4	19.82896	1694527785	-0.03846	75.6671	-0.03846	0.127
1984	0.037135	1.15518E+11	25.47269	388446666	19.77767	1762308896	0.030928	78.69378	0.052632	0.118
1983						1709439629		74.75909		